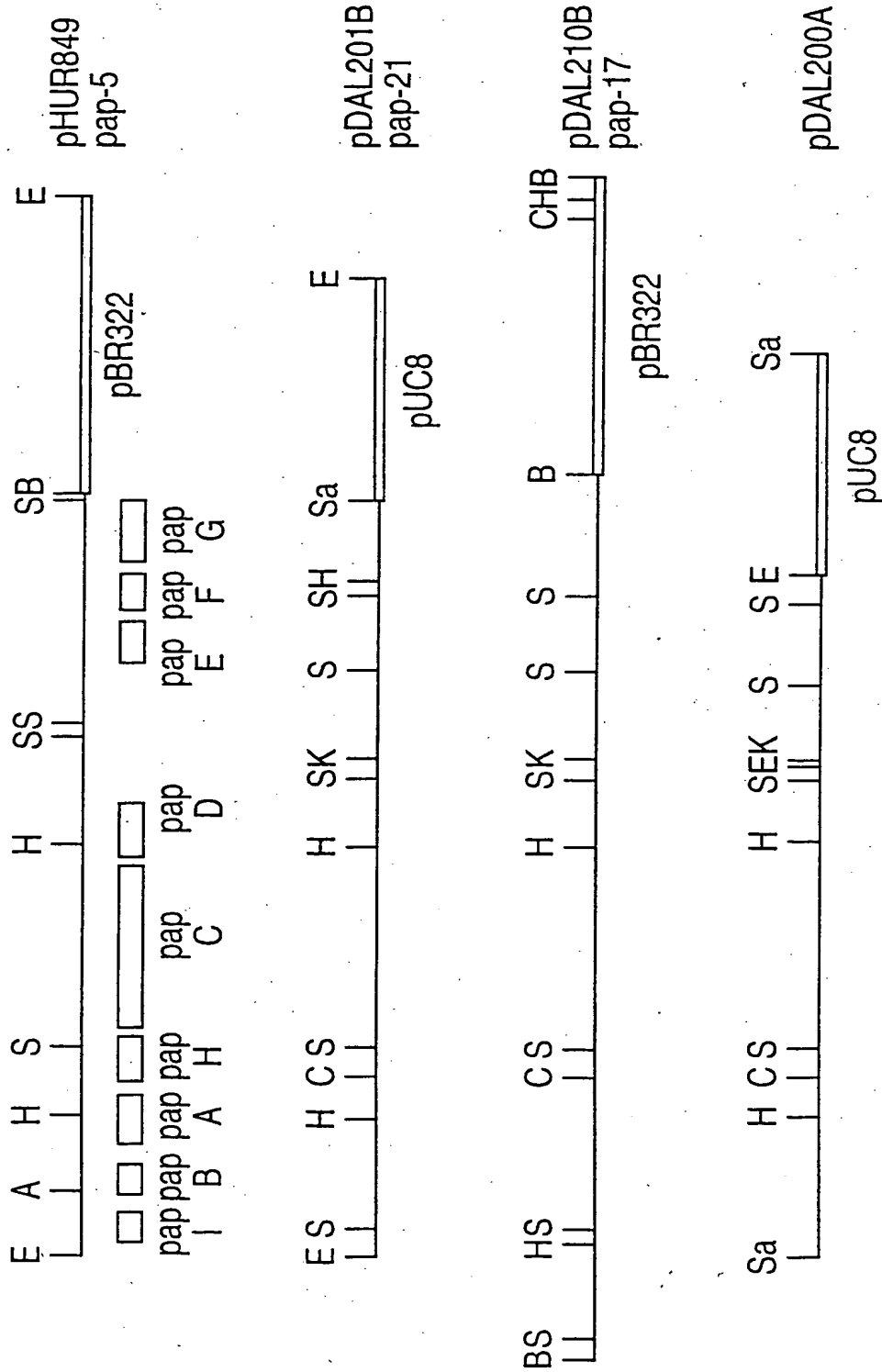


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FIG. 1

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FIG. 2A

1 ATGAGACTGCGATTCTCTGTTCCACTTTTCITTTTTGGCTGTGTGTTGTTTCATGGTGTT 60
M R L R F S V P L F F F G C V F V H G V
-22

61 TTTGCCGGTCCGTTTCCTCCGCCGGCATGTCCCTTCTGAATACTGGGGAGAAGAGCAC 120
F A G P F P P P G M S L P E Y W G E E H
-1 +1

121 GTATGGTGGGACGGCAGGGCTGCTTTTCATGGTGAGTTGTGACACCTGCCTGTACTCTG 180
V W W D G R A A F H G E V V R P A C T L

181 GCGATGGAAGACGCCTGGCAGATTATTGATATGGGGGAAACCCGGTACGGGATTTACAG 240
A M E D A W Q I I D M G E T P V R D L Q

241 ATTGGTTTCTCCGGACCTGAAAGAAAATTCAGCCTCCGGCTCAGGAATTGTGAATTTAAC 300
N G F S G P E R K F S L R L R N C E F N

301 AGTCAGGGTGGGAACCTTTTCTCTGATTCCCGGATAAGGGTGACTTTTCATGGCGTCCGG 360
S Q G G N L F S D S R I R V T F D G V R

361 GGTGAAACGCCGATAAGTTTAATTTATCCGGTCAGGCAAAGGCATTAATCTGCAGATA 420
G E T P D K F N L S G Q A K G I N L Q I

421 GCTGATGTCAGGGGAAATATTGCCCGGGCAGGAAAAGTAATGCCTGCAATACCATTGACG 480
A D V R G N I A R A G K V M P A I P L T

481 GGTAATGAAGAAGCGCTGGATTACCCCTCAGAATTGTGAGAAACGGAAAAAACTTGAA 540
G N E E A L D Y T L R I V R N G K K L E

541 GCCGGAATTATTTTGTGTGCTGGGATTCCGGGTCGATTATGAGTGA 588
A G N Y F A V L G F R V D Y E *

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FIG. 2B

1 ATGAGACTGCGATTCTCTGTTCCACTTTTCTTTTTTCTGCTGTGTGTTTGTTCATTGTGTT 60
M R L R F S V P L F F F C C V F V H C V
-22

61 TTTGCCGGTCCGTTTCTCCGCCGGCATGTCCCTTCTGAATACTGGGGAGAAGAACAC 120
F A G P F P P P G M S L P E Y W G E E H
-1 +1

121 GTATGGTGGGACGGCAGGGCTGCTTTTCATGGTGAGGTTGTCAGACCTGCCTGTACTCTG 180
V W W D G R A A F H G E V V R P A C T L

181 GCGATGGAAGACGCTGGCAGATTATCGATATGGGGAAACCCGGTTCCGGATTACAG 240
A M E D A W Q I I D M G E T P V R D L Q

241 ATTGGTTTCTCCGACCTGAAAGAAAATTCAGCCTCCGGCTCAGGAAGTGTGAATTTAAC 300
N G F S G P E R K F S L R L R N C E F N

301 AGTCAGGGTGGGAACCTTTTCTCTGATTCCCGGATAAGGGTGACTTTTCGATGGCGTCCGG 360
S Q G G N L F S D S R I R V T F D G V R

361 GGTGAAACGCCGGATAAGTTTAATTTATCCGGTCAGGCAAAGGAATTAATCTGCAGATA 420
G E T P D K F N L S G Q A K G I N L Q I

421 GCTGATGCCAGGGGAAATATTGCCCGGGCAGGGAAAGTAATGCCTGCAATACCATTGACG 480
A D A R G N I A R A G K V M P A I P L T

481 GGTAATGAAGAAGCGCTGGATTACACCCTCAGAATTGTGCGAAACGGAAAAAACTTGAA 540
G N E E A L D Y T L R I V R N G K K L E

541 GCCGGAATTTATTTTCCCGTGCTGGGATTCCGGGTCGATTATGAGTGA 588
A G N Y F A V L G F R V D Y E *

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APPROVED	O.G. FIG.	
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Title: IMMUNOGENIC PILI
PRESENTING FOREIGN PEPTIDES,
THEIR PRODUCTION AND USE
Inventor(s): Peter O'Hanley et al.
Appl. No.: 09/833,079

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FIG. 2C

1 ATGAGACTGCGATTCTCTGTTCCACTTTTCTTTTTTGTCTGTGTTTGTTCATGGTGT 60
M R L R F S V P L F F F C C V F V H G V
-22
61 TTTGCCGGTCCGTTTCTCCTCCCGGCATGTCCCTTCTGAATACTGGGGAGAAGAGCAC 120
F A G P F P P P G M S L P E Y W G E E H
-1 +1
121 GTATGGTGGGACGGCAGGGCTGCTTTTCATGGTGAGGTTGTCAGACCTGCCTGTACTCTG 180
V W W D G R A A F H G E V V R P A C T L
181 GCGATGGAAGACGCCTGGCAGATTATCGATATGGGGGAAACCCGGTTCGGGATTTACAG 240
A M E D A W Q I I D M G E T P V R D L Q
241 ATTGGTTTTTCCGGACCTGAAAGAAAATTCAGCCTCCGGCTCAGGAACGTGAATTTAAC 300
N G F S G P E R K F S L R L R N C E F N
301 AGTCAGGGTGGGAACCTTTTCTCTGATTCCCGGATAAGGGTGACTTTTCGATGGCGTCCGG 360
S Q G G N L F S D S R I R V T F D G V R
361 GGTGAAACGCCGGATAAGTTTAATTTATCCGGTCAGGCAAAAGGCATTAATCTGCAGATA 420
G E T P D K F N L S G Q A K G I N L Q I
421 GCTGATGCCAGGGGAAATATTGCCGGGCAGGGAAAGTAATGCCTGCAATACCATTGACG 480
A D A R G N I A R A G K V M P A I P L T
481 GGTAATGAAGAAGCGCTGGATTACACCTCAGAATTGTGAGAAACGGAAAAAACTTGAA 540
G N E E A L D Y T L R I V R N G K K L E
541 GCCGGAAATTATTTTCCCGTGCTGGGATTCCGGGTCGATTATGAGTGA 588
A G N Y F A V L G F R V D Y E *

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FIG. 2D

1 ATGAGACTGCGATTCTCTGTTCCACTTTTCTTTTTTGTGTGTGTTTGTTCATGGTGTT 60
M R L R F S V P L F F F C C V F V H G V
-22
61 TTGCGCGGTCCGTTTCCTCCGCCCGGCATGTCCCTTCTGAATACTGGGGAGAAGAACAC 120
F A G P F P P P G M S L P E Y W G E E H
-1 +1
121 GTATGGTGGGACGGCAGGGCTGCTTTTCATGGTGAGGTTGTCAGACCTGCCTGTACTCTG 180
V W W D G R A A F H G E V V R P A C T L
181 GCGATGGAAGACGCCTGGCAGATTATCGATATGGGGAAACCCCGGTTCCGGATTTACAG 240
A M E D A W Q I I D M G E T P V R D L Q
241 ATTGGTTTTTCCGGACCTGAAAGAAAATTCAGCCTCCGGCTCAGGAAGTGAATTTAAC 300
N G F S G P E R K F S L R L R N C E F N
301 AGTCAGGGTGGGAACCTTTTCTCTGATTCCCGGATAAGGGTGACTTTTCATGGTGTCGGG 360
S Q G G N L F S D S R I R V T F D G V R
361 GGTGAAACGCCGGATAAGTTTAATTTATCCGGTCAGGCAAAAGGCATTAATCTGCAGATA 420
G E T P D K F N L S G Q A K G I N L Q I
421 GCTGATGCCAGGGGAAATATTGCCCGGGCAGGGAAAGTAATGCCTGCAATACCATTGACG 480
A D A R G N I A R A G K V M P A I P L T
481 GGTAAATGAAGAAGCGCTGGATTACCCCTCAGAATTGTGCGAAACGGAAAAAACTTGAA 540
G N E E A L D Y T L R I V R N G K K L E
541 GCCGGAAATTATTTTCCCGTGCTGGGATTCCGGGTCGATTATGAGTGA 588
A G N Y F A V L G F R V D Y E *

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FIG. 3

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pHUR849	1	ATGAGACTGCGATTCTCTGTTCCACTTTTCTTTTTTGGCTGTGTGTTTGTTCATGGTGT	60
pDAL200A		t	
pDAL201B		t	
pDAL210B		t	
pHUR849	61	TTTGCCGGTCCGTTTCCTCCGCCCGGCATGTCCCTTCTGAATACTGGGGAGAAGAGCAC	120
pDAL200A		t	a
pDAL201B		t	a
pDAL210B			a
pHUR849	121	GTATGGTGGGACGGCAGGGCTGCTTTTCATGGTGAGGTTGTCAGACCTGCCTGTACTCTG	180
pDAL200A			
pDAL201B			
pDAL210B			
pHUR849	181	GCGATGGAAGACGCCTGGCAGATTATTGATATGGGGGAAACCCCGGTACGGGATTTACAG	240
pDAL200A		c	t
pDAL201B		c	t
pDAL210B		c	t
pHUR849	241	ATTGGTTTCTCCGGACCTGAAAGAAAATTCAGCCTCCGGCTCAGGAATTGTGAATTTAAC	300
pDAL200A			c
pDAL201B		t	c
pDAL210B		t	c
pHUR849	301	AGTCAGGGTGGGAACCTTTTCTCTGATTCCCGGATAAGGGTGACTTTCGATGGCGTCCGG	360
pDAL200A			
pDAL201B			
pDAL210B			
pHUR849	361	GGTGAAACGCCGGATAAGTTTAATTTATCCGGTCAGGCAAAAGGCATTAATCTGCAGATA	420
pDAL200A			a
pDAL201B			
pDAL210B			
pHUR849	421	GCTGATGTCAGGGGAAATATTGCCCGGGCAGGAAAAGTAATGCCTGCAATACCATTGACG	480
pDAL200A		c	g
pDAL201B		c	g
pDAL210B		c	g
pHUR849	481	GGTAATGAAGAAGCGCTGGATTACACCCTCAGAATTGTGAGAAACGGAAAAAACTTGAA	540
pDAL200A			c
pDAL201B			c
pDAL210B			c
pHUR849	541	GCCGGAAATTATTTTGCTGTGCTGGGATTCCGGGTCGATTATGAGTGA	588
pDAL200A		c	
pDAL201B		c	
pDAL210B		c	

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FIG. 5A

FIG. 5A

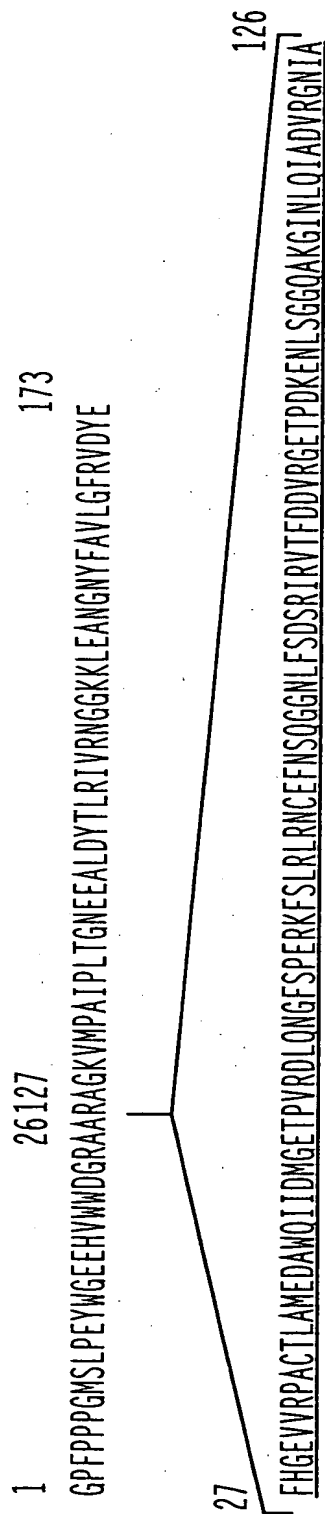
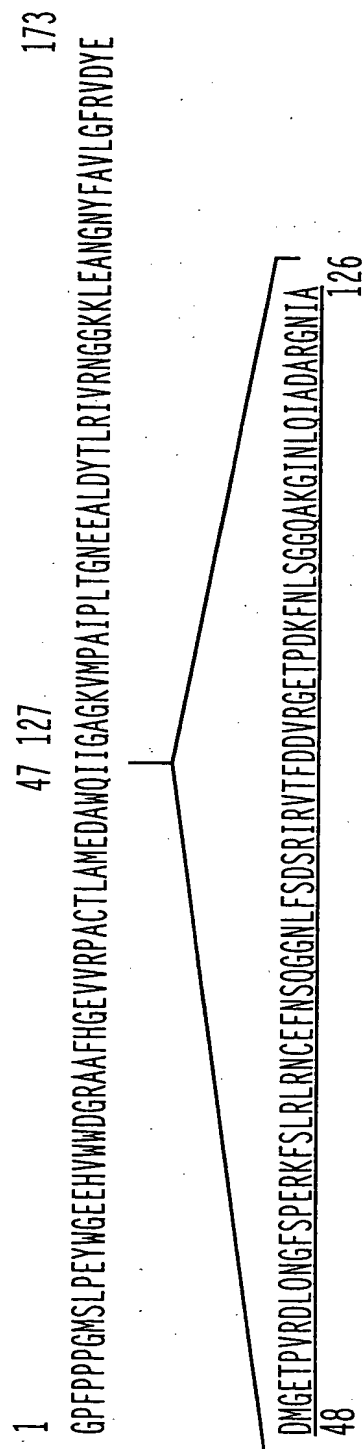


FIG. 5B



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